

II. Opportunities And Issues

Scoping is a process of identifying opportunities and issues, the knowledge of which would assist management in planning the Refuge's future course of action. The Service publicly announced it was preparing a Plan for the Refuge in November 1994. Information about the project was provided through news-releases, interviews, informational letters, and one-on-one briefings. Six public scoping meetings were held prior to the release of the draft CMP. From questions raised in conversations and correspondence with landowners, the general public, representatives from other Federal and state agencies, local officials, and private conservation organizations, the Service identified ten opportunities and issues currently facing the Refuge that the Plan must deal with. In addition, census data, research studies, and local plans were reviewed for relevant information such as the Kossuth County Community and Economic Development Strategic Plan. In that plan the county calls for reducing soil erosion, restoring wetlands, improving water quality, supporting the CRP program, and encouraging and promoting education programs for youth on the pros and cons of agricultural chemicals. The Service shares these issues and sees an opportunity to work with the County to achieve these common goals.

1. Long-term, Watershed-Based Coordination And Guidance

Several water quality, natural resource, and agricultural programs have emerged in the Union Slough watershed in recent years. The on-going Union Slough/Smith Lake Water Quality Incentive Program (WQIP) is one good example. The Conservation Reserve Program, Wetland Reserve Program, Environmental Quality Incentives Program, and Partners for Wildlife Program are others. The Refuge needs to reevaluate its management role and determine how it can intensify and concentrate these and other programs in the Refuge watershed to benefit Refuge resources. The Refuge's role within the local community and watershed is not well defined.

2. Water Quality And Refuge Wetlands

Recent studies indicate that waters entering the Refuge from surrounding watersheds transport large amounts of silt, sediment, and nutrients (nitrates and ammonia), which over time, cause major physical, chemical, and biological changes to Refuge wetlands. According to a 1995 U.S. Geological Survey study, the mean change in sediment thickness in Refuge pools since 1938 is 2.62 feet, which represents a mean sedimentation rate of approximately .5 inches per year, or the equivalent of dumping 2,230 dump truck loads of sediment into Refuge wetlands each year.

3. Biodiversity

The combined effects of human settlement and development trends have resulted in significant alterations to the natural flora and fauna within the Refuge watershed. Elk, bison, grizzly bear, prairie chickens, and whooping cranes are just a few of the species that have disappeared from the area. Marsh plants such as white top and wild rice that were once abundant in the area have been replaced by narrow leaf cattail, hybrid cattail, and reed canary grass. Many insects and

other prey that are dependent upon native grassland plants to survive, and which serve as the food base for many grassland birds, have also disappeared.

4. Production Of Nesting Waterfowl And Other Birds

Research has shown that hatch rates of dabbling duck nests at the Refuge (mean 11.9%) is lower than most reported areas, and recruitment rates, especially for mallards, is below what is needed to replace losses due to mortality. Predicted annual changes in the mallard population at the Refuge without the influx of pioneering birds has been estimated at -12.6 percent. Nest success rates of 15 percent or greater must be achieved to produce a surplus of dabbling ducks.

Presently Refuge birds must concentrate their nesting effort in a narrow fringe of habitat surrounding Refuge wetlands, where predators such as red fox, striped skunk, and raccoon easily forage. Large native predators (gray wolves, grizzly bear) which historically preyed on bison, livestock, and deer have been eliminated from the area and naturally replaced by medium-sized predators (fox, skunk, raccoon) that prey extensively on birds, their eggs, and their young.



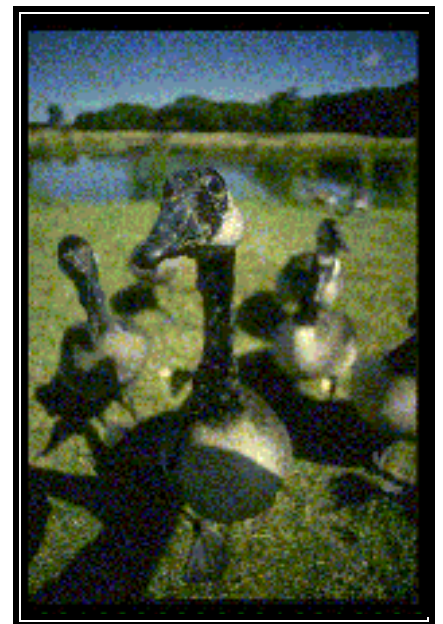
Red fox and other predators severely reduce duck production at the Refuge.

5. Wildlife Disturbance By People

Migrating waterfowl and eagles are easily disturbed by people using the auto tour route. The narrow land base surrounding Refuge wetlands has resulted in alignment of the auto tour route near the waters edge and in close proximity to resting birds. The auto tour route is often closed because of this disturbance.

6. Wildlife Crop Depredation

Neighboring farmers are suffering crop losses due to grazing by geese, ground squirrels, pheasants, and deer. Early season losses following emergence of corn and/or soybeans occur from all species on lands bordering the Refuge. Canada geese graze on soybeans, and to a lesser degree corn, for several weeks after emergence. White tail deer feed on crops throughout the growing season. Crop damage varies by species and location with some neighbors suffering greater losses than others.



Goslings and adult geese leave the nest together within 24 hours of hatching. They feed by grazing on young tender plants and may move several miles if necessary to find suitable browse.

7. Public Awareness Of Opportunities

The Refuge is not well known and understood within the local area. The Refuge needs to better promote its recreation and educational opportunities, including developing additional brochures, a general marketing plan, and utilizing local materials produced for the county and local communities.

8. Old And Deteriorating Facilities/Need For New Facilities

Many of the existing visitor facilities (Deer Meadow Picnic Area, Vanishing Prairie Trail, Refuge Headquarters) are old, in poor condition, or lack accessibility. There is a need to renovate existing facilities for safety and accessibility; to improve visitor information systems (signs and brochures); and to bring public facilities up to Service standards.

The Service and interested publics have identified several new facilities which will expand opportunities and support the long-term goals of the Refuge, watershed, and the county. The public expressed interest in providing additional places to see wildlife, additional youth environmental education facilities, canoeing, bicycling, and fishing opportunities.

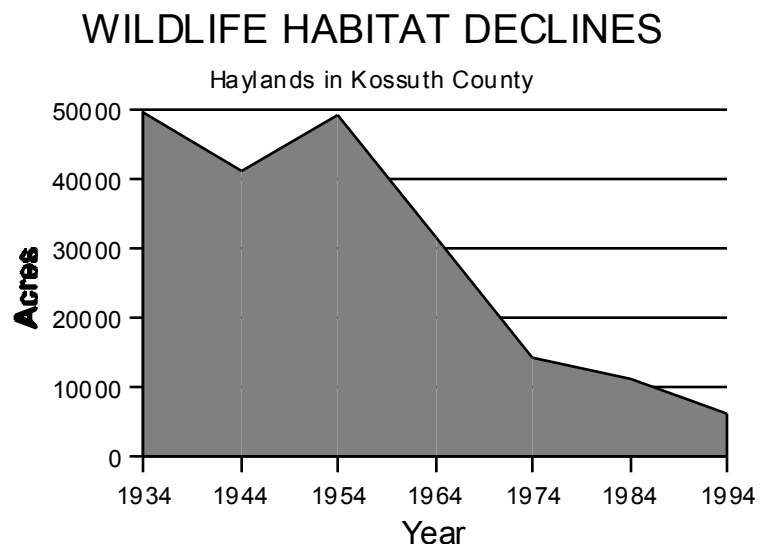
9. Wildlife Habitat Declines

Prior to European settlement, 85 percent of Iowa's landscape was native grasslands. Today, less than 1 percent remains.

Northcentral Iowa contained 2-3 million acres of wetlands scattered among a tallgrass prairie/wetland complex of approximately 7.6 million acres. Today, 98 percent of the wetlands and 99.9 percent of the prairies are gone.

For nearly 50 years following the initial conversion of native prairies around Union Slough, many prairie dependent wildlife remained relatively stable by their ability to colonize agricultural grasslands that

surrounded Refuge wetlands. However, since the 1950's the acreage of agricultural grasslands has significantly declined, and in many parts of the region, is at its lowest level in more than 100 years. Consequently, the Refuge has become an island of nesting habitat surrounded by rowcrop fields.



Statistics for Kossuth County indicate that 42,800 acres of haylands were present in 1937 when the Refuge was established. By 1976 that figure had decreased to 13,400 acres, and by 1994, haylands had decreased to 6,300 acres countywide, an 86 percent reduction from 1937. Lands within the Refuge watershed follow these county-wide trends.

10. Resource Inventories And Monitoring Systems

The Service has incomplete inventories for the Refuge's natural resources. For example, the Refuge has incomplete information on reptiles, amphibians, invertebrates, small mammals, fisheries and aquatic life, and migratory birds. Monitoring systems needed to protect and properly manage Refuge resources are also inadequate.